Silicon NPN Power Transistors 2SD1277 2SD1277A

DESCRIPTION

- With TO-220Fa package
- Complement to type 2SB951 and 2SB951A
- High forward current transfer ratio h_{FE}
- High-speed switching

APPLICATIONS

- For medium speed power switching

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

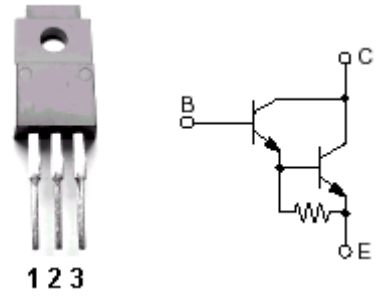


Fig.1 simplified outline (TO-220Fa) and symbol

ABSOLUTE MAXIMUM RATINGS AT Tc=25℃

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SD1277	Open emitter	60	V
		2SD1277A		80	
V_{CEO}	Collector-emitter voltage	2SD1277	Open base	60	V
		2SD1277A		80	
V_{EBO}	Emitter-base voltage		Open collector	7	V
I_C	Collector current (DC)			8	A
I_{CM}	Collector current-Peak			12	A
P_C	Collector power dissipation		T_C=25℃	45	W
			T_a=25℃	2	
T_j	Junction temperature			150	℃
T_{stg}	Storage temperature			-55~150	℃

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CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CEO}	Collector-emitter breakdown voltage	2SD1277	I_C=30mA , I_B=0	60			V
		2SD1277A		80			V
V_{CEsat}	Collector-emitter saturation voltage		I_C=4A I_B=8mA			1.5	V
V_{BEsat}	Base-emitter saturation voltage		I_C=4A I_B=8mA			2	V
I_{CBO}	Collector cut-off current	2SD1277	V_{CB}=60V I_E=0			0.1	Ma
		2SD1277A	V_{CB}=80V I_E=0			0.1	mA
I_{EBO}	Emitter cut-off current		V_{EB}=7V; I_C=0			2	mA
h_{FE-1}	DC current gain		I_C=8A ; V_{CE}=3V	500			
h_{FE-2}	DC current gain		I_C=4A ; V_{CE}=3V	2000		10000	
f_T	Transition frequency		I_C=0.5A; V_{CE}=10V;f=1MHz	20			MHz
Switching times							
t_{on}	Turn-on time		I_C=4A ;I_{B1}=8mA I_{B2}=-8mA;V_{CC}=50V		0.5		Ms
t_{stg}	Storage time				4		Ms
t_f	Fall time				1		μs

◆ h_{FE-2} Classifications

Q	R
2000-5000	4000-10000

PACKAGE OUTLINE

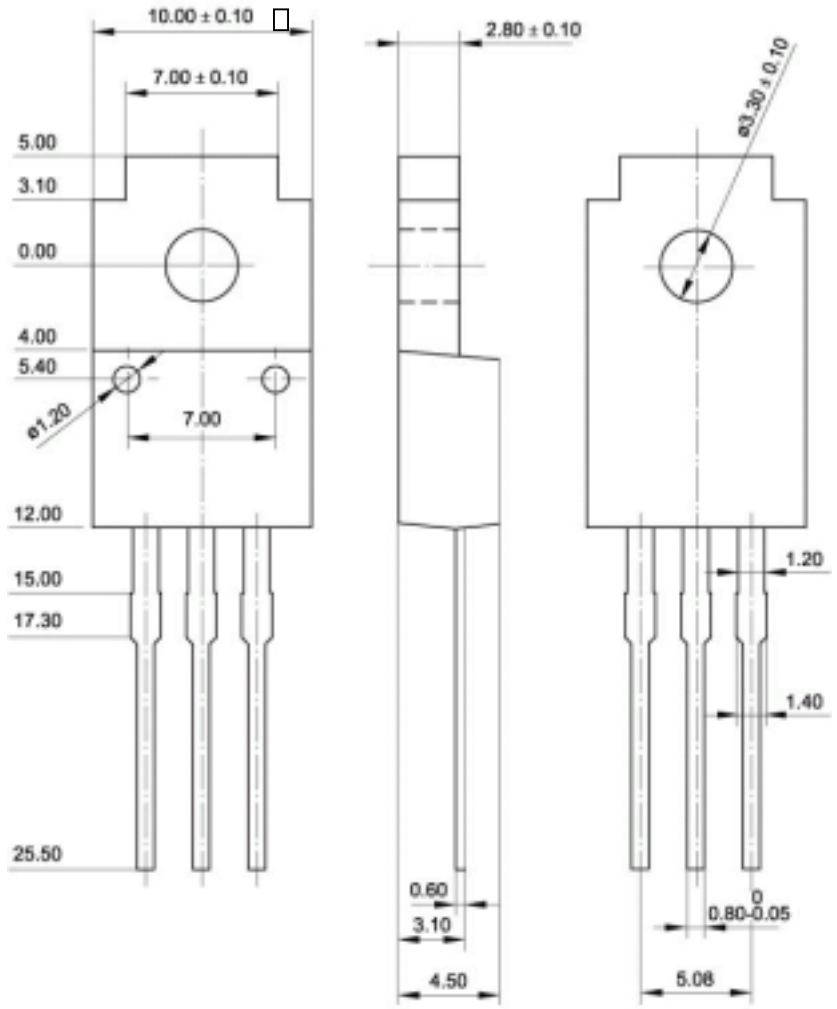


Fig.2 Outline dimensions (unindicated tolerance:±0.15 mm)